



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,036	02/12/2002	Aleksey Yezerets	4695-00010	7510

26753 7590 11/02/2004

ANDRUS, SCEALES, STARKE & SAWALL, LLP
100 EAST WISCONSIN AVENUE, SUITE 1100
MILWAUKEE, WI 53202

EXAMINER

TRAN, DIEM T

ART UNIT PAPER NUMBER

3748

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/075,036	Applicant(s) YEZERETS ET AL.	
	Examiner Diem Tran	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 30 and 31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

-This office action is in response to the amendment filed on 8/6/04. In this amendment, claims 1-29 have been canceled, and claims 30-31 have been added. Therefore, claims 30, 31 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peter et al. (US Patent 6,572,682).

Regarding claim 30, Peter discloses an exhaust emission control method comprising passing exhaust through a particulate filter from an upstream side thereof to a downstream side thereof to trap exhaust particulate in said particulate filter, after passage through said particulate filter passing said exhaust along a catalyst downstream of said particulate filter, regenerating said particulate filter by combusting said trapped particulate and producing a combustion product from said combustion of said trapped particulate, using said combustion product to assist regeneration of said downstream catalyst, wherein said exhaust is diesel engine exhaust, and said particulate filter is a diesel particulate filter trapping diesel exhaust particulate, including soot, said downstream catalyst is an NOx adsorber (see col. 3, lines 57-65, col. 4, lines 36-40, col. 9, lines 32-37, 47-49), said NOx adsorber comprises an NOx storage element and an NOx catalyst,

Art Unit: 3748

said NOx storage element is consisting of alkaline earth compounds such as barium oxide (see col. 9, lines 44-46), said combustion product is CO, and comprising providing said downstream NOx adsorber in sufficiently close proximity to said diesel particulate filter to carry out a thermodynamic favorable reaction with said CO, and regenerating said downstream NOx adsorber with said CO derived from said diesel particulate filter (see col. 9, lines 32-37); however, Peter fails to specifically disclose that the reaction occurs between CO producing from the process of burning the diesel particulate in the filter and NO desorbed from the NOx trap is $\text{NO} + \text{CO} \rightarrow 1/2\text{N}_2 + \text{CO}_2$.

It is well known to those with ordinary skill in the art that the general reduction process of NO involving CO is governed by the expression: $\text{NO} + \text{CO} \rightarrow 1/2\text{N}_2 + \text{CO}_2$.

Regarding claim 31, Peter discloses all the claimed limitations as discussed in claim 30 above, however, fails to disclose generating CO₂ from said CO according to $\text{O}_2 + \text{CO} \rightarrow \text{CO}_2$.

It is well known to those with ordinary skill in the art that the oxidation process of carbon monoxide (CO) in excess air of the lean burn diesel engine is governed by the expression: $\text{O}_2 + \text{CO} \rightarrow \text{CO}_2$.

Response to Arguments

Applicant's arguments filed on 8/6/04 have been fully considered but they are moot in view of a new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:30 a.m.- 5:00p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.



Diem Tran
Patent Examiner
Art unit 3748

DT
October 29, 2004



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700